

**ABSTRACT**

A medical device and position sensor combination  
for use in medical applications comprises a position  
sensor having a core made of a high permeable material .  
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The core material is made of a Wiegand effect material  
comprising a mixture of cobalt, vanadium, and iron. The  
position sensor has an outer diameter of approximately  
0.4 mm and is used in a medical device having an outer  
diameter of approximately 0.67 mm.  
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